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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/633,708	CHEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ling-Siu Choi	1713	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/02/2005.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date _____</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
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### **DETAILED ACTION**

1. This Office Action is in response to the Amendment filed September 2, 2005.

Claims 1-17 are now pending.

### ***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CAR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Brett S. Sylvester on November 11, 2005.

3. The application has been amended as follows:  
Cancel claims 9-17.

### ***Allowable Subject Matter***

4. Claims 1-8 are allowed.
5. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest references: Kathirgamanathan et al. (US 2003/0215669 A1).

A method to reduce photoelectric device leakage current caused by residual metal ions in conjugated polymer, comprising	
A	providing a conjugated polymer or a precursor thereof for a photoelectric device
B	forming a solution containing the conjugated polymer or the precursor thereof
C	<b>adding a chelating agent into the solution such that the residual metal ions in the conjugated polymer material or the precursor thereof are chelated by the chelating agent</b> , in an amount of from 0.01 to 50 % based on the weight of the conjugated polymer material or the precursor thereof
D	forming a film for photoelectric device from the resulting solution

(summary of claim 1)

Kathirgamanathan et al. disclose a method to make an electroluminescent device comprising (i) a first electrode, (ii) a hole transporting layer formed of a conjugated polymer, (iii) a layer consisting of an electroluminescent material, and (iv) a second electrode, wherein the conjugated polymer can be **poly(p-phenylene vinylene (PPV)** or copolymers thereof ([0011]-[0013];claims 1-7) and the **electroluminescent material has the formula of  $M(L_{\alpha})_n$**  with M being a rare earth metal, a transition metal, lanthanide, or an actinide ([0021]-[0022]; [0028]) and  $L_{\alpha}$  being a crown ether ([0071]; Examples). Kathirgamanathan et al. further disclose that “**the transporting material can be mixed with the electroluminescent material and co-deposited with it**”, wherein a solvent such as dichloromethane, n-methyl pyrrolidone, dimethyl sulphoxide,

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or tetra hydrofuran dimethylformamase can be used ([0073]; [0076]). However, Kathirgamanathan et al. do not teach or fairly suggest a method comprising a step to add a chelating agent into the solution of the conjugated polymer material to chelate the residual metal ions, which is in an amount of from 0.01 to 50 % based on the weight of the conjugated polymer material.

In light of the above discussion, it is evident as to why the present claims are patentable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reach on 571-272-1114.

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**LING-SUI CHOI**  
**PRIMARY EXAMINER**

November 11, 2005